

THE GREEN KINGFISHER

BY DWAIN W. WARNER

THE Green Kingfisher (*Chloroceryle americana*) inhabits watercourses and shores from southern Texas and Arizona to the northern tributaries of Hudson's La Plata, from the brackish water of mangrove-fringed lagoons to mountain streams 7000 feet above the sea. The two extremes of habitat are the exception, however; it prefers smaller rivers and streams and quiet pools of lowlands.

Water it must have, and in the water must be small fish upon which it feeds; but the land surrounding these waters may reflect, in various parts of this kingfisher's range, a wide range of climatic conditions. In the semi-arid coastal plain scrub of Tamaulipas I have found it in August along nearly dry arroyos where the only water was in depressions whose sides lay baked hard and cracked deeply under a torrid sun and whose contracting shore line was muddied by constant visitors of many kinds, especially flocks of White-winged Doves (*Zenaida asiatica*). Three weeks earlier I had found this little kingfisher perched in flooded scrub forest near Alta Mira over water four to ten feet deep and turbid with floating debris. In contrast I recall seeing it in January of 1944, along backwaters at the edge of tropical rainforest in Panamá. Again, in Puebla, México, in December of 1951, one individual was found at a still, dark pool in tropical evergreen forest at the brink of a hundred foot precipice overlooking the Río Cazones flowing nearly a thousand feet below.

At all of these places these little kingfishers perched quietly and for long periods, or changed positions on the perch, or flew rapidly in a direct manner to another perch. When startled, they occasionally gave a rattling twitter, sharper than that of the Belted Kingfisher (*Megaceryle alcyon*). I noted little other activity during the non-breeding season. In spring it becomes less solitary, calling increases, and with the approach of the mating period fighting for territories becomes a common sight where the birds are fairly numerous.

What the limitations to its distribution within its geographic range are is not known, but surely food must be one of the most important, and nest sites and competition with other birds possibly are limiting factors also. Its small size precludes its taking anything but small fish and perhaps other small aquatic animals. The prey, taken by short drops to the water, must be near the surface. The body weight (41.0, 42.8 grams; December males) prohibits a deep plunge from a low perch. Mr. Rczneat Darnell, who is completing a study on the fishes of the Río Sabinas in southwestern Tamaulipas, has in-

formed me that several species of *Gambusia* are the only small fish living near the surface of the river and its arroyos, and that they are probably the principal food of the Green Kingfisher there.

In winter I have not found more than a single bird at one place. By early December the families have apparently dispersed. A. C. Bent (1940. *U. S. Natl. Mus. Bull.* 176) reported that the Belted Kingfisher has been seen driving the Green Kingfisher from feeding grounds. But in Veracruz Robert Mengel and I found this small species inhabiting during July a part of the Río Jamapa where the Ringed (*Megaceryle torquata*) and the Amazon Kingfishers (*Chloroceryle amazona*) also occurred.

When considering other bird associates of the Green Kingfisher one cannot restrict the list to water birds alone. At the dark pool on the brink of the Mesa de San Diego in Puebla there were no other water birds, but forest species were common. The little kingfisher living there at the time paid no attention to the sound and activity about, but sat immobile for long periods, staring downward, where its own reflection was mirrored perfectly in the still waters.

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